REVOX®

B 260

FM - Tuner

Operating Instructions

Vorsicht: Das Gerät ist in ausgeschaltetem Zustand (STANDBY) nicht von der Stromzuführung getrennt.

Attention: Cet appareil n'est pas séparé du réseau lorsqu'il est déclenché (STANDBY).

Warning: This unit is not separated from the mains supply when switched off (STANDBY).

Attenzione: Questo apparecchio non è separato dalla rete quando l'interruttore è spento (STANDBY).

Precaución: Este aparato no está separado de la red cuando está apagado (STANDBY).

Waarschuwing: In uitgeschakelde toestand (STANDBY) is het apparaat niet gescheiden van de netspanning.

Advarsel: Apparaten er ogsaa hvis lukket (STANDBY) under strøm.

Huomio: Huolimatta siitä, että virta on katkaistu laitteesta (STANDBY), sitä ei ole eristetty sähköstä.

Forsiktig: Selvom strømmen ikke er pa i apparatet (STANDBY), sa er det ikke skilt fra strøm.

Varning: Oaktat om strömmen är avbruten i apparaten (STANDBY), sa är den ända kopplad med ström.

Operating Instructions
REVOX B260–E · FM Tuner

IMPORTANT

For the sake of clarity these operating instructions have been subdivided into the following five Sections:

SECTION 1

Installation procedure
Contains the basic information for operating the tuner.

SECTION 2

Main keypad
Explains all main functions of the tuner.

SECTION 3

Auxiliary keypad (behind hinged cover)
Explains all auxiliary and special functions that are not described in Section 2, such as TUNING, ANTENNA, BLEND, LEVEL.

SECTION 4

Technical appendix
Contains useful information concerning the operation of the tuner, error messages and corresponding corrective action, as well as technical data and dimensions.

SECTION 5

List of keypad functions
Contains a quick-reference operating guide for experienced and professional users and a summary of all keypad functions.

Synoptical diagram
At the end of this handbook you will find a foldout page with a Quick-Reference diagram on which all the operator controls have been assigned an index number. These numbers agree exactly with the bracketed numbers in the text.

Protect your tuner from exposure to excessive heat and moisture.

WARRANTY

Please note that the warranty is only valid within the country in which the equipment has been sold. The warranty becomes null and void if unauthorized modifications or unprofessional repairs are made.
Warranty cards for products sold in Switzerland and Austria are issued directly by the authorized dealer. Warranty cards for REVOX products sold in France are located inside the packing. This card must be completely filled out and signed by your authorized REVOX dealer.
A special warranty request card is included with all REVOX products sold within the Federal Republic of Germany, USA, and major other countries. This card is either located inside the packing or in a plastic pouch on the outside of the packing. Should this card be missing, please consult your REVOX dealer or your national REVOX distributor.

PACKING MATERIAL

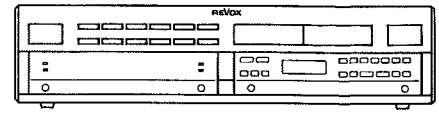
Please retain the original packing material for reuse in case your unit ever needs to be transported. The packing in which you received it has been especially designed to protect your valuable equipment from mechanical shock in transit.

Table of contents

SECTION 1

Installation

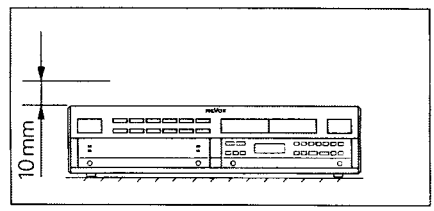
Accessories included,
setting up the tuner



Accessories included

The tuner is fitted with a fixed power cable and a plug of the type used in your country. If the contents are incorrect, please consult your dealer.

Setting up the tuner



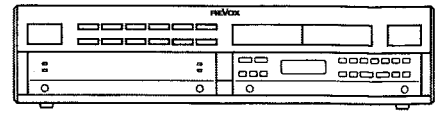
Set up your tuner in a position where there is a clearance of at least 10 mm (½ inch) from other equipment, walls and furniture.

Safety precautions

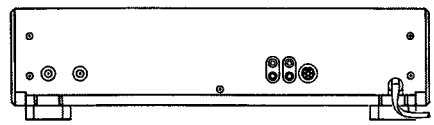
Connect the tuner to the AC outlet only by means of the fitted power cable.
Always keep the tuner in dry condition. It is extremely hazardous to operate it in moist conditions (bathroom, laundry room, basement, etc.)
The tuner is not disconnected from the AC power source when it is switched off (stand-by). Certain components inside the unit are always energized with line voltage!
The tuner is designed to be operated in a horizontal position.
In case of a malfunction or a defect, immediately disconnect the power plug and have the tuner checked out by an authorized REVOX dealer.

Start-up

Line voltage,
connection, power on

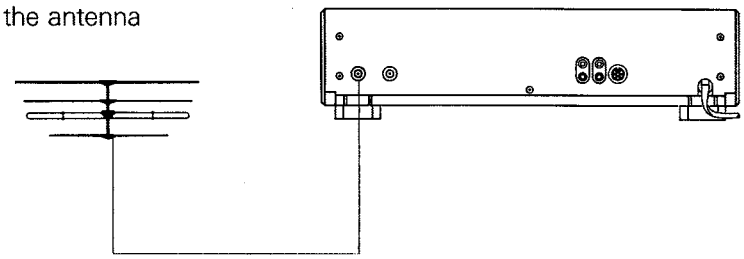


Checking the line voltage



Make sure that the voltage rating imprinted below the power inlet corresponds to your local line voltage.
The tuner can be altered to a different line voltage but this work should be performed by your dealer.

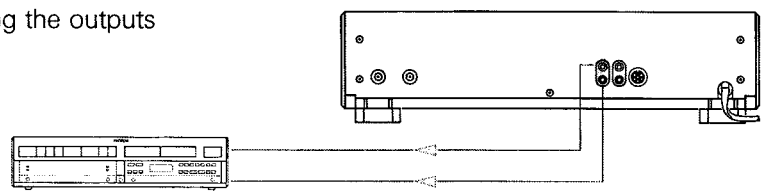
Connecting the antenna



You can connect two antennas (A [33] and B [34]) with 75 Ohm coaxial cables to your tuner. Both sockets have identical functions.
If you have access to a local cable network, connect the antenna socket A [35] to the antenna outlet by means of commercially available antenna cable. In addition you can connect an external antenna or a room antenna to the other socket B [34] so that programs can be received that are not transmitted via the network.

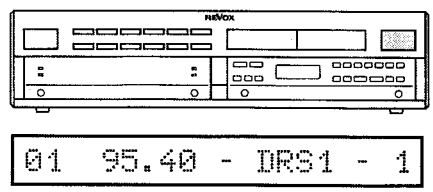
The ideal site for external or room antennas can be determined by experimenting.

Connecting the outputs



The audio (signal) outputs AUDIO L/R [35] are to be connected to the TUNER inputs of your amplifier (REVOX B250-S). Do not confuse the left-hand (L) and right-hand (R) channels.

Power on

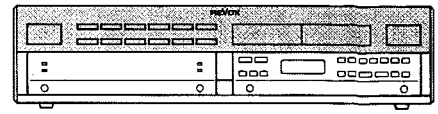


Press the POWER [1] key on the front panel to switch on the FM tuner. The station memory that was active when the tuner was previously switched off is automatically reactivated.
When you press the POWER [1] key again, the tuner switches off (standby).
When the tuner is switched off but still connected to the AC power source, it operates in standby mode which means that it can be conveniently switched on and off by means of the REVOX B208 IR remote control from your listening position. The power consumption in standby is negligible (approx. 5 W).

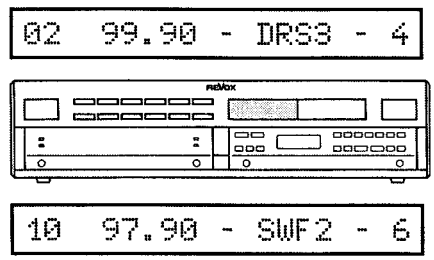
SECTION 2

Main keypad

Summary of functions

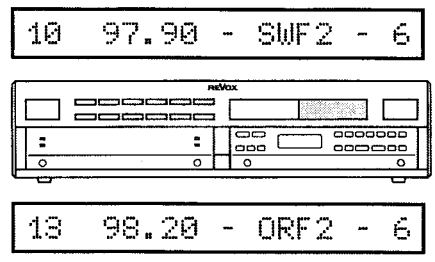


STATION SCAN [3]



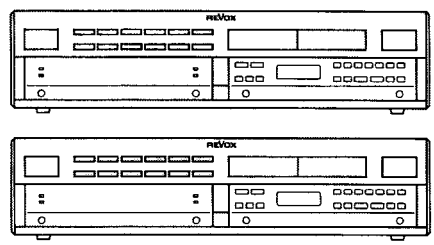
When you press the STATION SCAN [3] key the next of the 60 station memories is read out in ascending (>) or descending (<) order.
When you hold down this key continuously, each station stored in the memories can be briefly heard.
Station memories with the program identification 0 (P-TYPE 0) will be skipped.

P-TYPE SCAN [2]



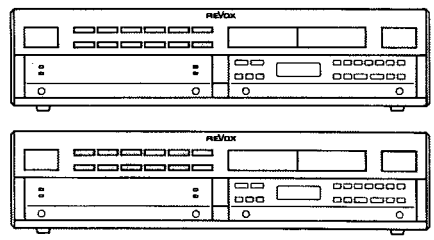
The P-TYPE SCAN [2] key reads out the next of the 60 station memories with identical program identification (P-TYPE) in ascending (>) or descending (<) sequence.
When you hold down this key continuously, each station with identical program identification will be briefly heard.
A program ID number from 0 to 9 can be assigned to any station memory.

ENTER [6]

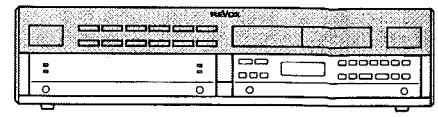


With the ENTER [6] key you can switch on the tuner and automatically reactivate the previously heard station or a specific station memory.
In the latter case you should enter the number of the memory (1 to 60) by means of the numeric keys [7] before you press the ENTER [6] key.

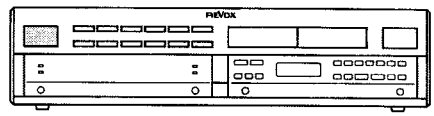
P-TYPE [5]

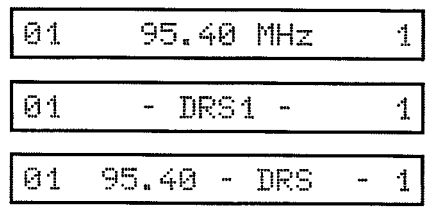


When you press the P-TYPE [5] key, the tuner activates the mode for entering the program identification (P-TYPE).
After this key has been pressed, you can enter the desired program type (0 to 9) by means of the numeric keys [7]. When you subsequently press the ENTER [6] key, the next higher station memory with matching program identification is activated.



<DISPLAY> [8]



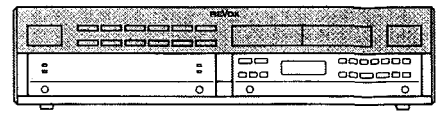


With the <DISPLAY> [8] key you can page through the display modes in ascending (>) or descending sequence (<). The following three display modes can be selected:
a) Displaying the received frequency
b) Displaying the station abbreviation
c) Displaying the received frequency and the station abbreviation

The number of the selected station memory and the program identification (P–TYPE) are displayed.

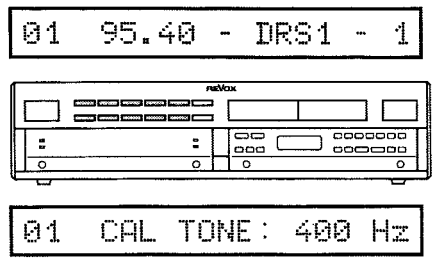
Main keypad

Reading out the station memories



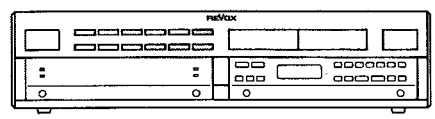
A station memory can be read out directly by entering the corresponding memory number.

● Press numeric input



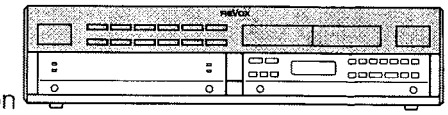
With the numeric keys [7] enter the number of the desired station memory. For stations 1 to 9 only a single digit needs to be entered, i. e. the leading zero is not necessary.
When you enter station number 0, the internal calibration tone generator will be activated. The number of the previously active station remains on the display [11].

● Press ENTER [6] key



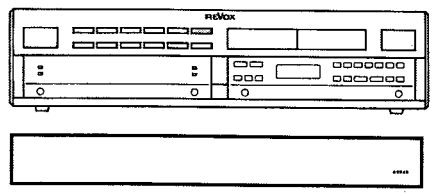
The selected station memory is readout when you press the ENTER [6] key.

Reading out the program identification



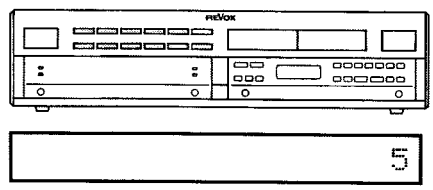
A station memory can be read out by entering the program identification (P-TYPE).

● Press P-TYPE [5]



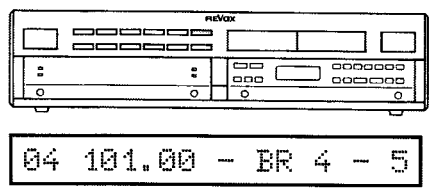
The tuner expects you to enter a program number (0 to 9). Only the flashing cursor in the position of the program identification is visible on the display [11].

● Press numeric input key [7]

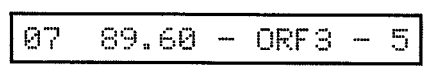


Enter the desired program identification by means of the numeric keys [7].

● Press ENTER [6]



When you press the ENTER [6] key, the next higher station memory with matching program identification will be read out.

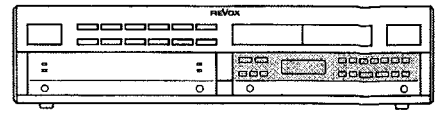


You can select the next station memory with matching program identification by pressing the P-TYPE SCAN [2] key.

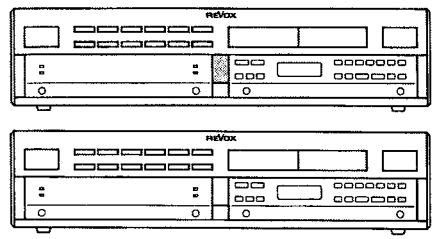
SECTION 3

Auxiliary keypad

Hinged cover, station selection

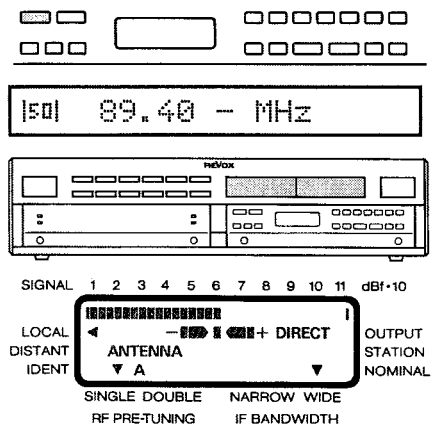


Hinged cover



The tinted acrylic glass cover of the second keypad can be opened by pressing the OPEN [4] key. The LC display [19] becomes illuminated.
To close the cover simply push it up so that it locks in place. The illumination of the LC display switches off and any input on the auxiliary keypad that has not yet been terminated with STORE [31] will be cancelled and the prior status restored. The selected tuning mode (TUNING [14] key) is cancelled, the unit switches to tuning mode, i.e. the previously active station memory is reactivated.

TUNING [14]



The TUNING [14] key activates the manual tuning mode for entering or searching station frequencies. The display [11] shows only the frequency, and in place of the station number the frequency step width is shown in kHz.
At the same time the functions of the keys [2] and [3] of the main keypad are changed in accordance with their lower designation to AUTOTUNING [2] and FREQUENCY STEP [3].
The manual tuning mode is acknowledged on the display [19] by the word DIRECT.
This function can be cancelled by pressing the STATION [18] key or by closing the hinged cover.

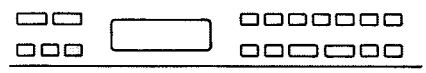
Station selection

The station memories of the tuner are loaded with test frequencies used for final inspection before the unit leaves the factory. These frequencies are unlikely to agree with the local station frequencies.
The tuner should, therefore, be reprogrammed for the local frequencies as follows.

Known frequencies

Enter the station frequencies that you know from program guides or frequency schedules as described under MANUAL STATION SELECTION.

Unknown frequencies



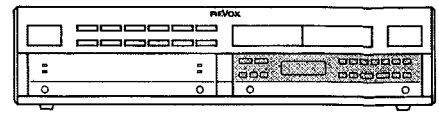
After you have programmed the known frequencies, proceed according to the Section AUTOMATIC STATION SELECTION and store each station by pressing AUTO [29] that is receivable with the DISTANT [17] key pressed. Then write down the frequencies of the worthwile stations or rearrange the assignment of the station memories directly by copying them into other memories (refer to Section: COPYING THE STATION MEMORIES).

Modifying the reception parameters

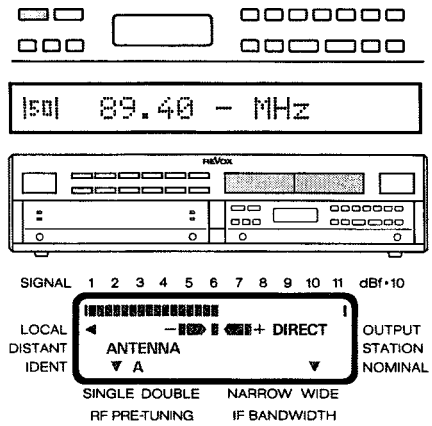
As the last step you can store the reception conditions for each station as described in the Section: MODIFYING THE RECEPTION PARAMETERS.

Auxiliary keypad

Automatic station selection

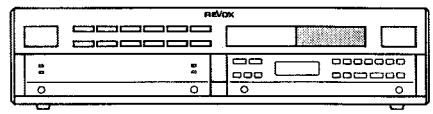


● Press TUNING [14] key



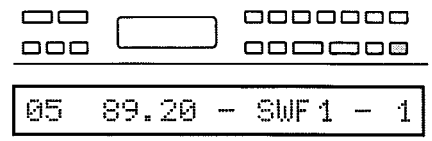
The TUNING [14] key activates the mode for searching station frequencies. The display [11] shows only the frequency and in place of the station number the step frequency width (channel pattern) in kHz is indicated.
The functions of keys [2] and [3] of the main keypad are changed to AUTOTUNING [2] and FREQUENCY STEP [3] in accordance with the lower designation.
The tuning mode is acknowledged on the LC display [19] by the message DIRECT.

● Press AUTOTUNING [2] key



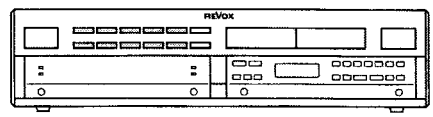
A brief touch of the AUTOTUNING [2] key in tuning mode activates the station scan in the specified direction (> = higher frequencies, < = lower frequencies). During the scan the audio is muted as indicated by the MUTING LED [12] next to the display [11].
When a station with adequate signal strength has been found (bargraph on LC display [19]), the search stops. The frequency is shown on the display [11]. If a stereo broadcast is being received, the STEREO [13] LED lights up.

● Press STORE [31]



This step prepares the store function for the tuned frequency. The station number flashes on the display [11].

● Press numeric input keys [7]

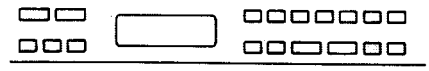


The number of the desired station memory can be entered via the numeric keys [7].

● Press ENTER [6]

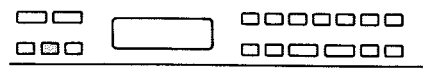
The tuned frequency and the reception parameters are stored in the specified station memory.

● AUTO [29] key



In place of the last three input steps (STORE, numeric keys, ENTER) you can simply press the AUTO [29] key. The frequency and the reception parameters will automatically be stored in the next vacant station memory or the next station memory with program identification 0.

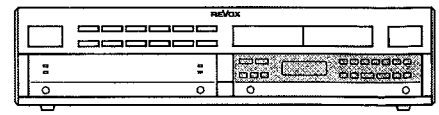
RECALL [16]



After the tuned frequency has been manually altered with AUTOTUNING or FREQUENCY STEP, you can recall from the station memory the frequency of the last station you have listened to by pressing RECALL [16].

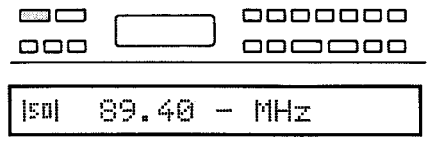
Auxiliary keypad

Manual station selection



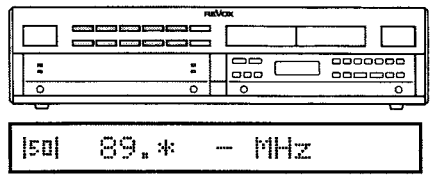
When the station frequency is known (from program guides or frequency schedules), the frequency can be set directly by means of the numeric input keys [7].

● Press TUNING [14] key



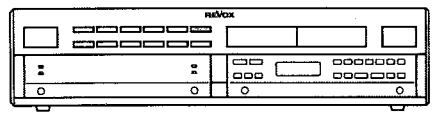
The TUNING [14] key activates the mode for searching station frequencies. The display [11] shows only the frequency and the step width.

● Press numeric keys [7]



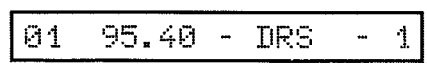
Enter the desired frequency by means of the numeric keys [7].
The microprocessor checks instantly that the entered value falls within the available FM frequency band and rejects incorrect entries.
In the event of an error, an asterisk (*) appears on the display [11] which means that the entry must be repeated with valid digits.

● Press ENTER [6] key



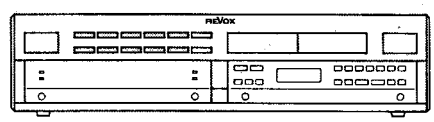
The entered frequency is set and the station becomes audible. After any corrections of the reception parameters (see modification of reception parameters), the entered frequency can be saved in a station memory.

● Press STORE [31] key



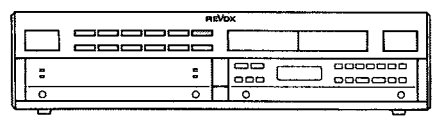
This is the preparatory step for storing the frequency. The station frequency flashes on the display [11].

● Press numeric keys [7]



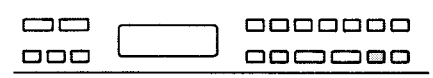
Enter the number of the station memory by means of the numeric keys [7].

● Press ENTER [6] key



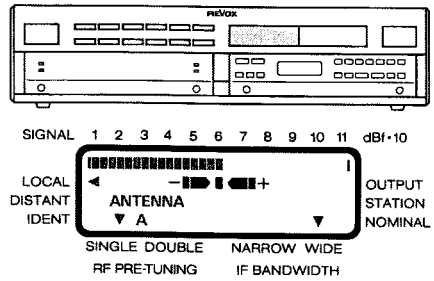
The frequency and the reception parameters are stored in the specified station memory.

● AUTO [29] key



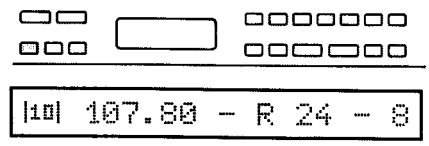
Instead of performing the last three input steps (STORE, numeric keys and ENTER) you can simply press the AUTO [29] key. The frequency and the reception parameters will automatically be stored in the next vacant station memory or the next station memory with program identification 0.

FREQUENCY STEP [3]



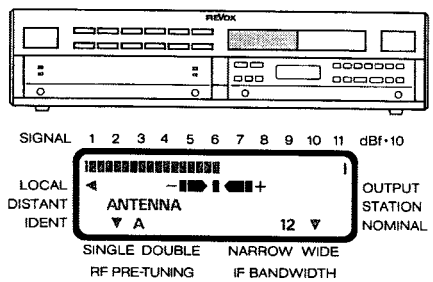
You can increase (>) or decrease (<) the tuning frequencies in steps according to the selected channel pattern (10 kHz/50 kHz) by pressing the STEP [15] key. In this way you can receive stations that broadcast on a frequency that is outside the 50 kHz channel pattern.
The tuner can be tuned exactly to the station frequency with the aid of the center channel indicator on the LC display [19]. Tuning is correct when the two symbols + and – are simultaneously visible. If only one of these sym bols is displayed, the tuned frequency should be shifted in the direction of the arrow.

STEP [15]

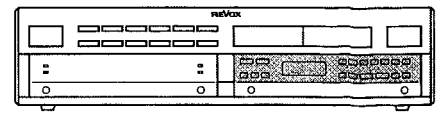


If you are tuning to a station that does not broadcast on a frequency of the 50 kHz channel pattern, you can press the STEP [15] key to switch the step width to 10 kHz (channel pattern = frequency spacing in kHz of the individual stations). Press this key again to switch back to the 50 kHz channel pattern.
The selected channel pattern is shown on the display [11] in place of the station number.

Note:

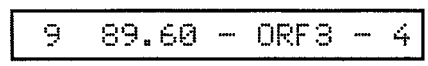


In AUTOTUNING mode the tuner always scans in the 50 kHz channel pattern, even when the 10 kHz step width has been selected. For stations that broadcast on a frequency outside this channel pattern, the frequency at which the scan stops will be off center. You can manually tune this frequency by pressing the FREQUENCY STEP [3] key until the indicator on the LC display [19] signals that center-channel tuning has been achieved.



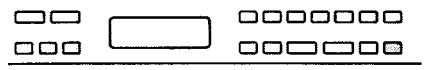
The procedure for copying the complete contents of a station memory (frequency, station abbreviation, program identification, and reception parameters) is very simple.

● Press numeric keys [7] and ENTER [6]



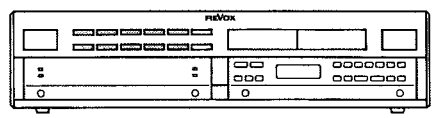
This recalls the memory to be copied.

● Press STORE [31] key



This is a preparatory step for the store operation.

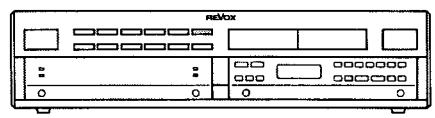
● Press numeric keys [7]



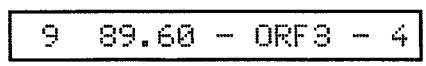
Enter the memory location into which the information is to be copied.

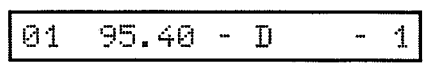
Caution:
The old content of this memory will be lost because it is overwritten by the new information to be copied.

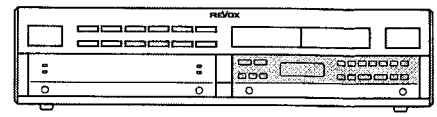
● Press ENTER [6] key



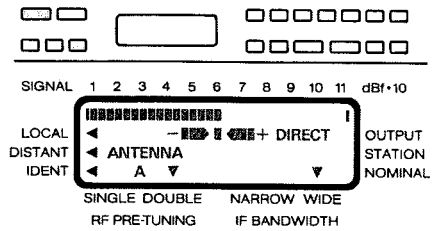
The selected station memory is overwritten with the data of the other memory. Both memories now contain identical data.







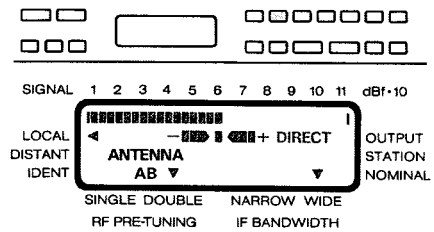
SEARCH [17]



In tuning mode (TUNING [14] key pressed), you can switch between local and distant muting thresholds by pressing the SEARCH [17] key.
In the LOCAL position (indicated by an arrow on the display), the search threshold is 100 µV which means that only strong stations will be selected.
In the DISTANT position the search threshold is 4 µV so that also weak, distant transmitters will be selected.

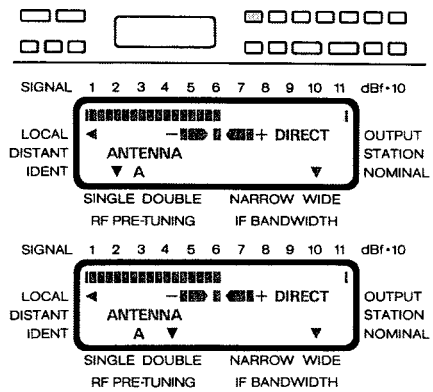
The third position, IDENT, can only be activated in conjunction with the RDS option and enables you to search based on matching station identification.

ANTENNA [22]



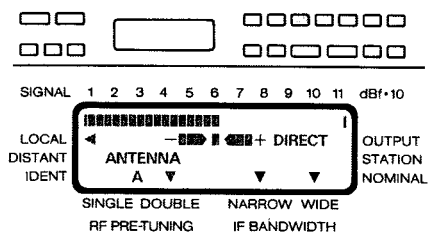
With the ANTENNA [22] key you can switch between the two antenna inputs A and B. The currently active antenna input is identified on the LC display [19] by the corresponding letter.

RF [20]



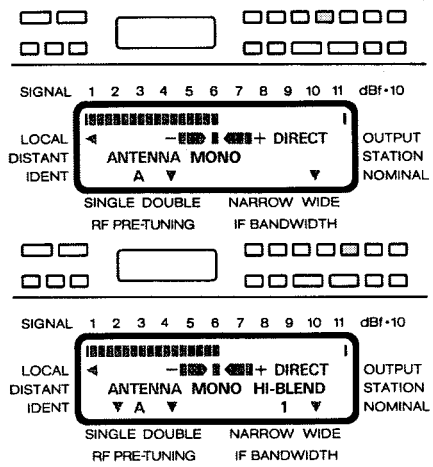
With the RF [20] key you can change the RF selection (RF PRE-TUNING) between SINGLE and DOUBLE. Two arrows on the LC display [19] signal the corresponding selection.
Normally the tuner is operated in SINGLE mode because it ensures maximum sensitivity of the antenna input.
For better selection of strong stations without interference from adjacent channels, DOUBLE reduces the antenna sensitivity by 4 dB.

IF [24]



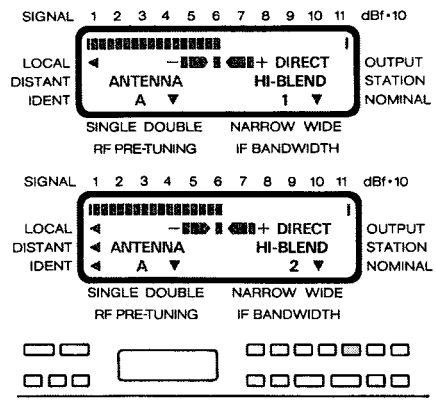
With the IF [24] key you can change the IF BANDWIDTH between WIDE and NARROW. Two arrows on the LC display [19] signal the corresponding bandwidth.
Normally the tuner is operated in WIDE mode (150 kHz bandwidth) because it ensures minimal harmonic distortion.
For better adjacent channel selectivity the NARROW (110 kHz bandwidth) setting can be used.

MONO [26]



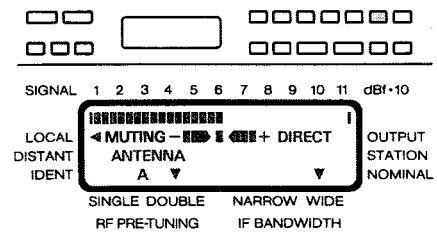
When the MONO [26] function is selected (acknowledged on the LC display [19] with the word MONO), stereo broadcasts can be received in mono mode in order to eliminate noise resulting from weak signals, if activation of the BLEND [28] filter proves to be ineffective.

BLEND [28]



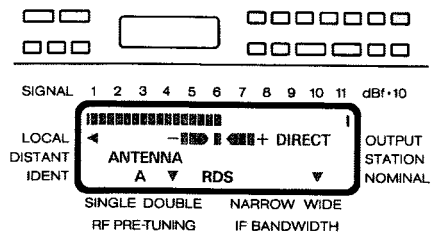
Switch-controlled, 2-stage HI-BLEND filter for suppressing stereo noise. The selected filter position is shown on the LC display [19] with the word HI-BLEND 1 or HI-BLEND 2. Press the BLEND [28] key repetitively until the desired setting is obtained.

MUTING [30]



With the MUTE [30] key you can enable or disable the automatic MUTING of stations yielding insufficient signal strength. When the MUTING function is disabled, the word MUTING is not shown on the LC display [19]. In this mode you can receive weak stations with, however, considerably degraded reception quality (antenna noise).

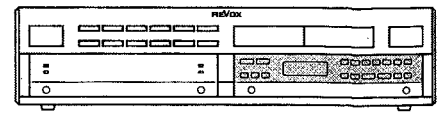
RDS [32]

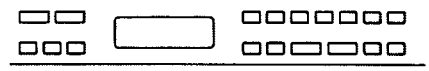


Your tuner is already prepared for the future RDS (Radio Data System). It simply needs to be retrofitted with the RDS system.
This system can then be activated with the RDS [32] key.

Auxiliary keypad

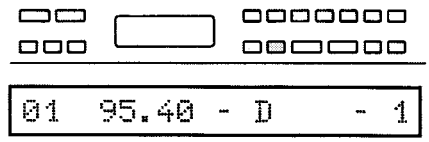
Entering the station abbreviations





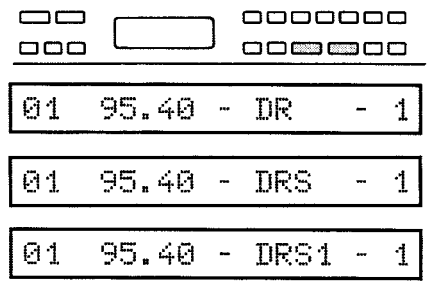
In Station mode (STATION [18] pressed) you can store a station abbreviation with a length of up to 4 characters in each of the 60 station memories.

CURSOR [23]



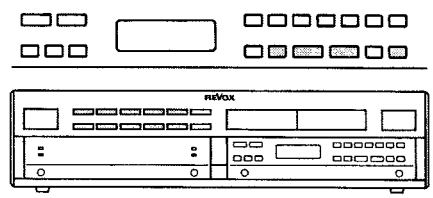
When the CURSOR [23] key is pressed the first time, it activates the mode for entering the alphanumeric station abbreviations. The first position of the name field flashes.
Each time this key is pressed again, the position indicator moves one position to the right. After the fourth position it returns to the first position.

● Press < [25] or > [27] key



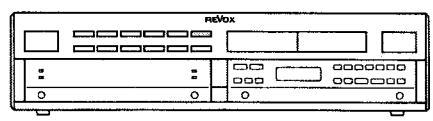
With these keys you can page through the alphanumeric character set (letters A to Z, digits 0 to 9 and "space") in ascending (>) or descending (<) order.

● Press STORE [31] key

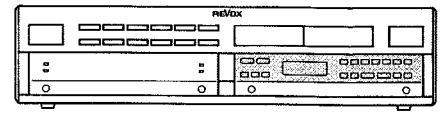


After you have entered the station abbreviation by alternately pressing the CURSOR [23] key and < [25] or > [27], press STORE [31] to instruct the processor that you wish to save the data in memory.
The number of the current station memory flashes. It can be modified with the aid of the numeric keys [7].

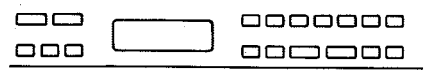
● Press ENTER [6] key



All tuner settings (frequency, program identification, station abbreviation, and reception parameters) are written into the station memory identified on the display.

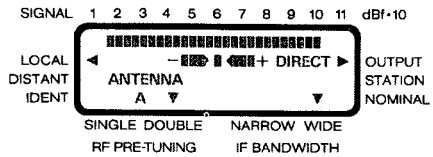


LEVEL [21]



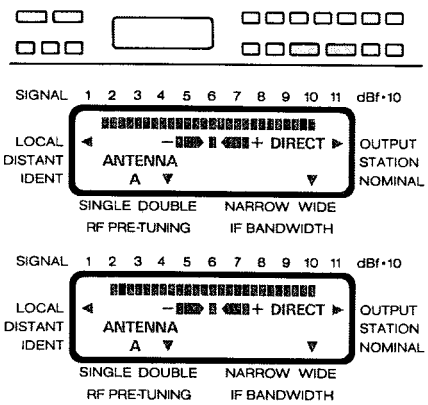
The LEVEL [21] key activates the mode for entering level adjustments.

● Press LEVEL [21] key



Press this key once to activate the mode for changing the level of the OUTPUT amplifier. This mode is acknowledged on the LC display [19] by a flashing arrow to the word OUTPUT and a bargraph symbol. The flashing bargraph segment indicates the current setting.

● Press < [25] or > [27]



The level of the AUDIO output [35] can be modified with < [25] and > [27].
The maximum level is set when the flashing rectangle is located between the numbers 9 and 10.
The minimum level (– 20 dB) is set when the flashing square is located between the numbers 2 and 3.

Note:

Any level change is executed immediately and stored in memory which means that it is not necessary to press the STORE key.

CAL TONE: 400 Hz

The correctness of the output level setting can be verified as follows:

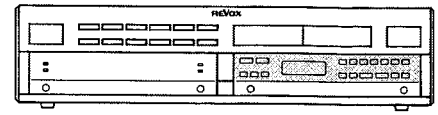
● Press the keys 0 and ENTER

The built-in calibration tone generator is switched on when the station memory 00 is accessed. This is acknowledged on the display [11] by the message CAL TONE: 400 Hz (the station number and program identification of the last active station are retained).

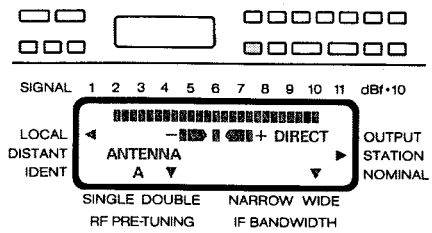
A 400 Hz sine wave signal with a level that corresponds to a frequency deviation of 40 kHz is fed to the AUDIO OUTPUTS [35] (for most stations the maximum volume is achieved with this frequency deviation).

Factory settings

The factory settings for the output level (maximum value) and station level (medium value) can be reestablished at any time.
Repetitively press the LEVEL [21] key until the message RESTORE NOMINAL? appears on the display [11].
If you now press the STORE [31] key the factory settings will be reestablished.

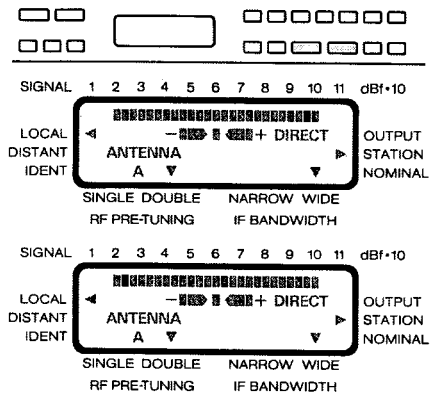


LEVEL [21]



Press the LEVEL [21] key twice to activate the mode for changing the level of the current station. This is acknowledged on the LC display [19] by a flashing arrow to the word STATION. The flashing bargraph segment indicates the current setting.

● Press < [25] or > [27]



The level stored in the station memory can be modified by ±6 dB with < [25] and > [27]. The factory sets the levels of all station memories to a medium value (0 dB).

Note:

Any level change is executed immediately and stored in memory which means that it is not necessary to press the STORE key.

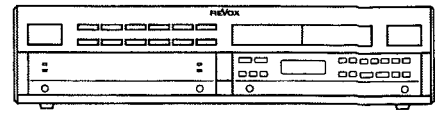
Factory settings

The factory settings for the output level (maximum value) and station level (medium value) can be reestablished at any time.
Repetitively press the LEVEL [21] key until the message RESTORE NOMINAL? appears on the display [11].
If you now press the STORE [31] key the factory settings will be reestablished.

SECTION 4

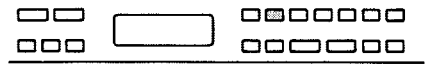
Fault sources

Troubleshooting



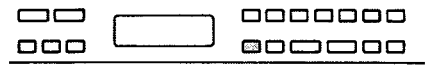
Before you suspect a fault in the tuner, make sure that the unit is correctly installed and that it is being operated in accordance with these instructions.

Station scan does not function



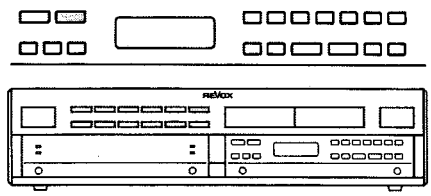
Is your antenna connected correctly?
Is the corresponding antenna input A or B switched on? Press ANTENNA [22] key.
Have you activated the tuning mode? Press TUNING [14] key.

The stations are inaudible



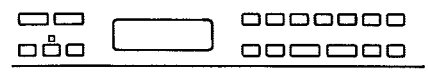
Is your tuner correctly connected to the amplifier?
Is your amplifier set to the correct signal source (TUNER)?
Is the setting for the output level or the station level too low? This can be verified byreestablishing the factory settings (RESTORE NOMINAL?) by pressing the LEVEL [21] key.

Station memories cannot be selected



Is your tuner in station mode?
When the hinged cover is closed, thetuner always operates in station mode. This mode can also be activated by pressing the STATION [18] key.
Did you press the ENTER [6] key after selecting the station number with the numeric keys [7]?
A station memory is not retrieved until the ENTER [6] key is pressed.

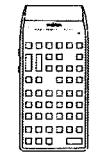
The tuner cannot be operated



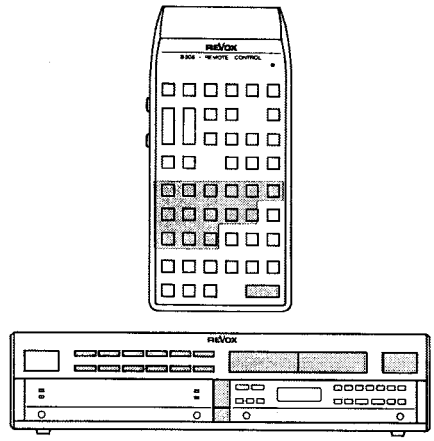
Your tuner is controlled and monitored by a microprocessor. This microprocessor is automatically initialized when the line voltage is applied.
Faults in the AC supply system or other faults can put the microprocessor into an undefined state. The tuner can no longer be operated.

In order to reinitialize the microprocessor, press the RESET button located above the RECALL [16] key by means of a pointed object (bent open paper clip).
If the power plug is readily accessible it is better to disconnect it from the AC outlet for approx. 15 seconds rather than pressing the RESET button.

During the initialization of the microprocessor certain segments of the display [11] may briefly light up. This is a normal process and does not damage the unit.



REVOX B208



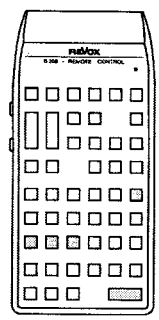
With the REVOX B208 infrared remote control you can conveniently control the audio functions of your REVOX hi-fi system from your listening position.

Except for the DISPLAY [8] key, you can remotely control all functions of the main keypad of the REVOX B260-S tuner in station mode.

Operating characteristics

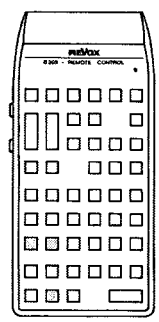
With the IR remote control you can operate your tuner in the same manner as on the unit itself.
When the unit has been in TUNING mode, the station mode is immediately reactivated as soon as an IR remote control command is received.

Power on



The tuner can only be powered on with the IR remote control by selecting ENTER, P-TYPE, <SCAN>, <STATION> and the numeric keys. If you press the POWER OFF key on the IR remote control then all IR-equipped REVOX equipment will be switched off.

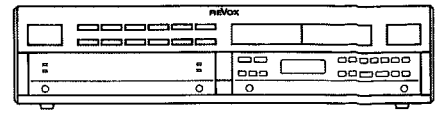
STATION SCAN



For the STATION SCAN function the "•" key must be pressed together with STATION < or STATION >.

Special feature:

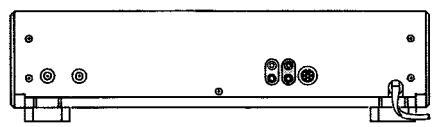
The IR remote control features two "•" and two "*" keys. Each pair is connected in parallel. Functions that require you to press two keys, such as STATION SCAN, are easier to execute if you press the control key (• or *) with the hand in which you are holding the remote control. This leaves your other hand free for actuating the function key.
It makes no difference whether you press the key on the top or the side of the remote control unit.



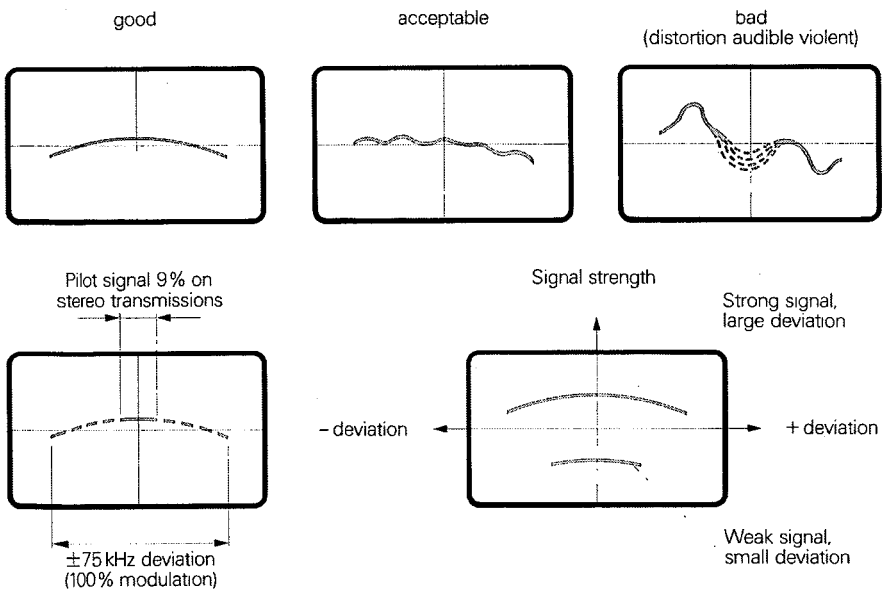
Multipath reception

Multipath reception occurs when in addition to the direct signal from the transmitter antenna of a given station, signals reflected from building walls or mountains are also received. The different delays between these two signals can produce undesirable distortions that cannot be corrected even by the best receiver.
Although the REVOX B260-S · tuner offers maximum immunity against such phenomena, the only effective remedy in many cases is to relocate the antenna to a different position. The true quality of the received signal can be measured on the SCOPE [36] sockets.

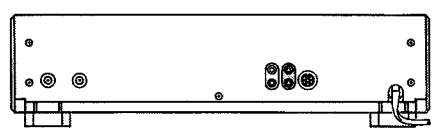
SCOPE [36]



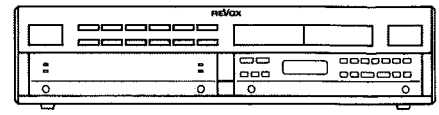
A cathode ray oscilloscope (with external X-input) can be connected to the SCOPE [36] outputs for displaying and analyzing the multipath reception.
The illustrations on the left are showing three kinds of delay distortions as displayed on an oscilloscope screen. Via the sockets SCOPE [36] frequency deviation and signal strength can be displayed. If you wish to make visible the signal strength as well, an oscilloscope with DC-input is required.



Analog signal meter



If you prefer an analog signal meter (needle-type instrument) for analyzing the strength of the incoming signal, you can connect it to the SCOPE Y [36] output.
A 100µA instrument should be used.



Interesting facts about RDS (Radio Data System)

RDS is a system for transmitting auxiliary information (data) via a radio transmitter. The introduction of RDS will considerably enhance the services offered by FM radio. A subcarrier modulated with a data channel is broadcast by the radio transmitter together with the conventional stereo signal and can be processed by tuners that are equipped for receiving such signals.
Such data increase the operating convenience of the listeners and offer a wealth of useful supplementary information.

During the introductory phase the following RDS services will be offered:

- **Program name**
  The program name comprising up to eight characters will be transmitted over the data channel (Example: DRS1, BRF3, BBC1, SWF2).
- **Alternate frequencies**
  If an FM program can be received on multiple frequencies, these so-called alternate frequencies are transmitted over the data channel.
- **ARI replacement**
  During the introductory phase of ten years, RDS will eventually replace the ARI system which supplies information to motorists. During this changeover period, receivers equipped for RDS can already be used while those equipped for ARI can be operated as usual.
  Identification of transmitters that broadcast traffic information and their announcements is possible as has been the case with ARI.

The following examples are planned enhancements to the radio data systems which are to be implemented after the introductory phase.
The scope of these enhancements will depend on the radio transmitters and on the equipment manufacturers.

- **Program type**
  After the introduction of satellite radio, the transmitters will be assigned a uniform type of program identification (P-TYPE) such as DRS3, SWF3, BR4, ORF3.
  Examples are given under the Section "P-TYPE".
- **Voice and music**
  Frequently, a difference in the volume between music and voice is desired. In the future it may be possible to control the volume by means of the RDS data channel.
- **Text display**
  One of the refinements planned for RDS foresees the possibility of broadcasting any texts (e.g. program changes of a station) which can be made visible on the 64-position display of future tuners.
- **Time signal**
  Broadcasting of control signals that permit synchronization of local clocks with a reference clock. This means local clocks could be controlled by the tuner.

However, these enhancements are only available if the radio transmitters and the receivers are correspondingly equipped. Conventional tuners cannot use the RDS information.
Your REVOX B260-S Tuner is already prepared for operation with RDS. When the RDS system goes on the air, your tuner can be easily upgraded by retrofitting the corresponding RDS option.

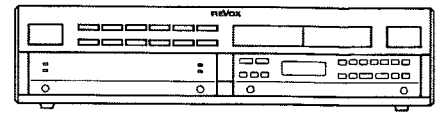
P-TYPE

To permit logical grouping by program types, a standard has been agreed upon in Europe. This means that all programs of a given type that can be received in Europe either directly or via satellite can be accessed by the same P-Type.

P-TYPE	Designation	Description
1	News	Short accounts of facts, events and publicly expressed views, reportage and actuality.
2	Current affairs	Topical programs expanding or enlarging upon the news, generally in different presentation style or concept, including documentary, debate, or analysis.
3	Information	Programs whose purpose is to impart advice in the widest sense, including Metrological Reports and Forecasts, Consumer affairs, Medical help etc.
4	Sport	Programs concerned with any aspect of Sport.
5	Education	Programs intended primarily to educate, of which the pedagogical element is fundamental.
6	Drama	All radio plays and serials.
7	Cultures	Programs concerned with any aspect of National or Regional culture, including Religious affairs, Philosophy, Social Science, Language, Theatre, etc.
8	Science	Programs about the Natural Sciences and Technology.
9	Varied	Used for mainly speech-based programs usually of light-entertainment nature, not covered by above categories. Examples are: Quizzes, Panel Games, Personality interviews, Comedy and Satire.
10	Pop	Commercial music, which would generally be considered to be of current popular appeal, often featuring in current or recent record sales charts.
11	Rock	Contemporary modern music, usually written and performed by young musicians.
12	M.O.R.	(Middle of the Road Music). Common term to describe Music regarded to be "easy-listening", as opposed to Pop, Rock or Classical. Music in this category is often, but not always, vocal, and usually of short duration (<5 minutes).
13	Light classics	Classical Music for general, rather than specialist appreciation. Examples of music in this category are instrumental music, and vocal arias or choral works.
14	Serious classics	Performances of major orchestral works, symphonies, chamber music etc., and including Grand Opera.
15	Other music	Musical styles not fitting into any of the above categories. Particularly used for specialist music, of which Jazz, Rhythm & Blues, Folk, Country, and Reggae are examples.
16–30	Unassigned	These P-TYPES have not yet been defined.
31	Alarm	Alarm messages in the event of unexpected emergencies (National catastrophies e.g. floods, fire, etc.)

Technical appendix

Technical data



	Unless stated otherwise, the following data are measured at 98 MHz, 1 mV RF signal, and 400 Hz frequency modulation.	
Tuning range:	87.50 MHz ... 108.00 MHz sweepable by means of quartz-accurate frequency synthesizer in automatic station scan or individual steps.	
Channel pattern:	switch-selectable:	10 kHz/50 kHz
Frequency input:	via keypad, AUTOTUNING (50 kHz) or FREQUENCY STEP (10 kHz/50 kHz).	
Quartz reference:	accuracy:	±0.001 %
Absolute sensitivity:	SINGLE, NARROW: for a signal-to-noise ratio of 26 dB, relative to 40 kHz frequency deviation.	0.5 µV
Usable sensitivity:	SINGLE: Mono Stereo DOUBLE: Mono Stereo for a signal-to-noise ratio of 46 dB, relative to 40 kHz frequency deviation.	2 µV 20 µV 3 µV 30 µV
Image rejection:	DOUBLE:	>100 dB
IF rejection:		>110 dB
Spurious response rejection:		>110 dB
RF intermodulation attenuation:	DOUBLE: relative to the absolute sensitivity and 2 MHz frequency spacing.	>90 dB
Capture ratio:	WIDE: for a signal-to-noise ratio of 30 dB, relative to 40 kHz frequency deviation.	0.5 dB
Bandwidth (–3 dB):	WIDE: NARROW:	150 kHz 110 kHz
Selection:	WIDE: NARROW: measured with 300 kHz spacing.	>50 dB >100 dB
AM rejection:	at 30 % amplitude modulation, relative to 75 kHz frequency deviation.	>72 dB
Frequency response:	20 Hz ... 15 kHz:	±0.5 dB
De-emphasis:		50 µs USA: 75 µs
AF distortion:	for stereo L=R, 1 kHz modulation, relative to 40 kHz frequency deviation.	0.07 %
Signal-to-noise ratio:	30 Hz ... 15 kHz relative to 75 kHz frequency deviation, for mono 1 mV RF signal, for stereo 10 mV RF signal.	>80 dB
Stereo crosstalk attenuation:	BLEND 1: BLEND 2: for 1 kHz modulation, relative to 40 kHz frequency deviation.	>43 dB 15 dB 7 dB
Pilot tone suppression:	15 kHz ... 300 kHz with 75 kHz frequency deviation.	>78 dB
Changeover thresholds:	MUTING: Stereo:	2 µV 10 µV
Station scan thresholds:	DISTANT: LOCAL:	4 µV 100 µV
Antenna inputs A/B:	coaxial, according to IEC/DIN 54325	75 Ohm
RF crosstalk attenuation A/B:		>70 dB
Calibration tone:	relative to 40 kHz frequency deviation:	400 Hz
AF output Level/impedance:	(at 75 kHz frequency deviation): 1.9 V/600 Ohm OUTPUT adjustable: 0 dB ... –20 dB Stations adjustable:	±6 dB
Oscilloscope output Level/impedance:	X-output at 75 kHz frequency deviation: 2 Vpp Y-output at 1 mV RF into 75 Ohm:	3 V
Serial link:	6-pin socket for connection to the REVOX remote control system.	

Station preselection:	Station memories: Storable are: frequency, station abbreviation, program identification, and reception parameters.	60
Displays:	20-position 5 x 7 dot matrix vacuum fluorescence display with brightness control. Multifunctional liquid crystal display (LCD). Illumination interlocked with cover switch.	
Signal strength indicator:	31-position bargraph diagram, 10 dBf ... 110 dBf	
Indicator for center-channel tuning:	4-step symbol Sensitivity: with 50 kHz channel pattern: with 10 kHz channel pattern:	 ±25 kHz ±5 kHz
Power requirements:	220 V AC + 5/–10 %, 50 ... 60 Hz Solder strappable to 110 V or 240 V	
Power fuse:	220 V, 240 V: 110 V:	T 250 mA slow T 500 mA slow
Power consumption:	max.: in standby:	30 W <6 W
Dimensions:	(W x H x D):	480 x 108 x 332 mm
Weight:		7.5 kg

Subject to change.

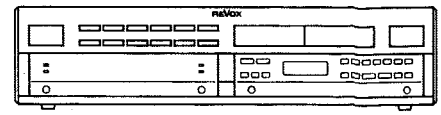
IHF standard

Antenna impedance:		75 Ohm
Monophonic usable sensitivity:	Single:	0.95 µV/10.8 dBf
Monophonic 50 dB quieting sensitivity:	Single: Double:	1.25 µV/13.2 dBf 1.98 µV/17.2 dBf
Stereophonic 50 dB quieting sensitivity:	Single: Double:	15.0 µV/34.8 dBf 23.8 µV/38.8 dBf
Monophonic:	S/N Ratio at 65 dBf:	86 dB
Stereophonic:	S/N Ratio at 85 dBf:	82 dB
Distortion at 65 dBf Monophonic 1 kHz:	Wide/Narrow:	0.13 %
Distortion at 65 dBf Stereophonic 1 kHz:	Wide: Narrow:	0.2 % 0.8 %
Capture ratio at 65 dBf:		1.5 dB
Selectivity adjacent channel (av.):	Wide: Narrow:	8 dB 16 dB
Selectivity alternate channel (av.):	Wide: Narrow:	50 dB 100 dB
Spurious rejection:	(fs + fi/2):	110 dB
Image rejection:	(fs + (2*fi)) Double:	100 dB
IF rejection:	(fi):	110 dB
Muting threshold:		18 dBf
Stereo threshold:		32 dBf
Frequency response	20 Hz ... 15 kHz:	±0.5 dB
Subcarrier Product rejection:		78 dB
Stereo separation	1 kHz:	43 dB
Output level:		1.8 V

SECTION 5

Index of keypad functions

Quick-reference description of all functions



•)) Functions that respond to the REVOX B208 remote control

Front panel:

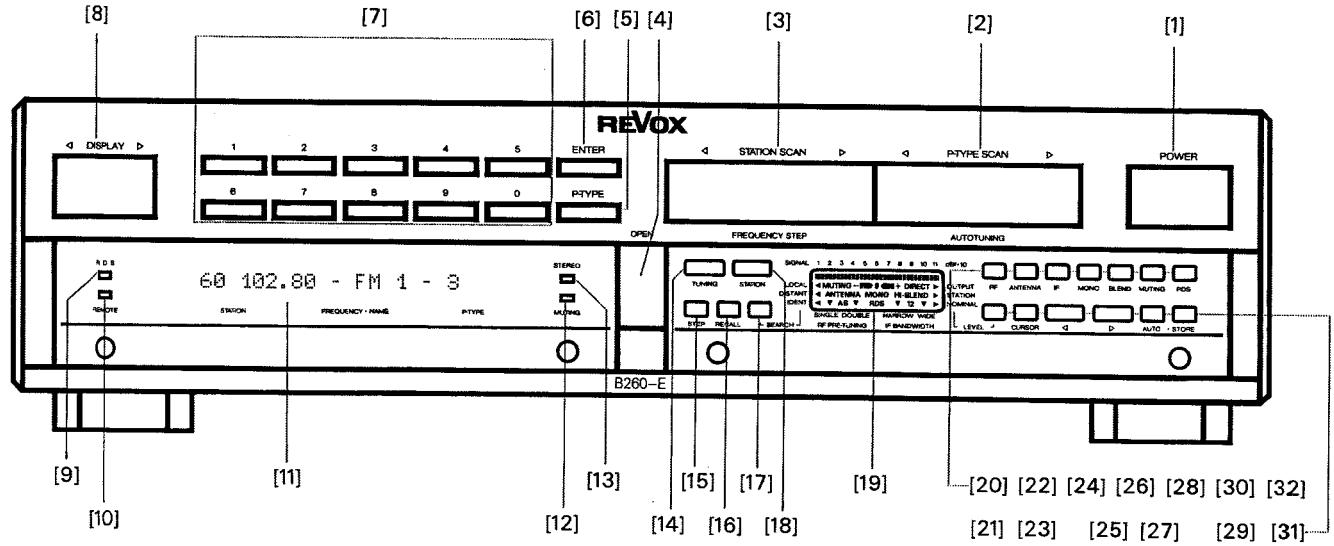
Operating element			Function	Page
[1]	POWER	•))	On/off switch. The tuner is switched on and the last tuned station is reactivated. The tuner is switched off (standby) when this key is pressed again.	5
[2]	P-TYPE SCAN	•))	Scan station memories in ascending or descending order with matching program identification (P-TYPE). When this key is continuously held down, each station with matching identification will be heard for a few seconds.	7
	AUTOTUNING		In tuning mode (TUNING [14] pressed) this function activates the automatic station scan in ascending or descending order.	11
[3]	STATION SCAN	•))	Scanning in ascending or descending order of the programmed station memories 1 through 60. When this key is continuously held down, each station will be heard for a few seconds.	7
	FREQUENCY STEP		In tuning mode (TUNING [14] key pressed) this function manually changes the frequency by one step of the size determined with the STEP [15] key.	16
[4]	OPEN		Opens the hinged cover under which the auxiliary keypad and the IR receiver are located. To close the cover simply push it up until it locks in place.	11
[5]	P-TYPE	•))	Sets up the mode for entering a program identification (P-TYPE). The processor expects the input of a digit (0 to 9) and termination with the ENTER [6] key.	7
[6]	ENTER	•))	Activates the input function after the retrieval or programming of the station memory or program identification (P-TYPE).	7
[7]	Numeric keys	•))	Keypad for numeric input when: recalling the station memories, recalling P-Types, entering a station frequency.	9
[8]	DISPLAY		Changeover of the DISPLAY [11] format: station abbreviation, tuning frequency, or both. Station memory and program identification are always displayed.	8
[9]	RDS		This LED signals that the tuned station transmits RDS data.	29
[10]	REMOTE		This LED lights up when an IR control command is received.	26
[11]	Display		20-position vacuum fluorescence display. Indicates the operating state of the tuner.	11
[12]	MUTING		This LED signals that muting of the audio outputs is active when no station with adequate signal strength is received. This function can be defeated with the MUTING [31] key.	19
[13]	STEREO		This LED signals that the tuned station is being received in stereo mode. This LED switches off when the mono mode is activated with the MONO [26] key.	13

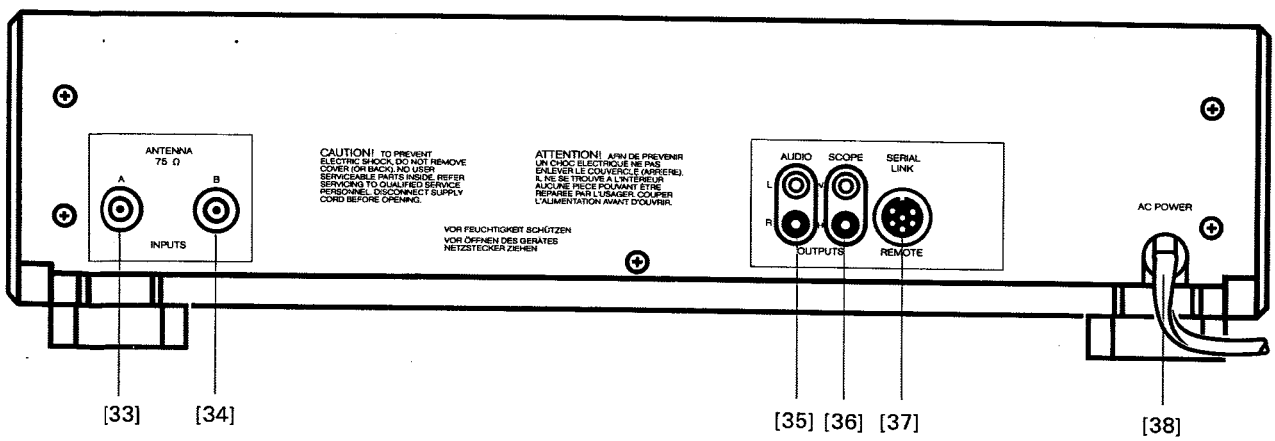
Operating element	Function	Page
[14] TUNING	Switches the unit to tuning mode for station scan or for entering tuning frequencies. The functions of keys [2] and [3] change to AUTOTUNING and FREQUENCY STEP in accordance with their lower designation. This function can be cancelled by pressing the STATION [18] key or by closing the hinged cover.	11
[15] STEP	Switch for selecting the channel pattern in tuning mode. The selected step width (10 kHz or 50 kHz) for FREQUENCY STEP is shown on the display [11]. The AUTOTUNING function always uses the 50 kHz channel pattern.	16
[16] RECALL	Recalls the frequency of the last active station memory after the tuning frequency has been modified in tuning mode.	14
[17] SEARCH	Switch for selecting the muting threshold in automatic station scan (AUTOTUNING). LOCAL: Only strong, local stations will be selected. DISTANT: The search stops at all receivable stations.	18
[18] STATION	Cancels the TUNING [14] function. The keys [2] and [3] are reassigned to their original functions, i.e. P-TYPE SCAN and STATION SCAN.	11
[19] LC DISPLAY	Multifunctional display field that indicates: signal strength, center tuning, MUTING, DIRECT, ANTENNA, MONO, HI-BLEND, SEARCH-MODE, LEVEL-MODE, RF PRE-TUNING, IF BANDWIDTH.	11
[20] RF	Switch for selecting the RF level of the antenna amplifier. SINGLE: Maximum antenna sensitivity. DOUBLE: Improves the selection of strong stations.	18
[21] LEVEL	Switch for matching the level of the AUDIO [35] output to the preamplifier and for adjusting the level of the 60 station memories. OUTPUT: adjust output level. STATION: adjust station level. NOMINAL: reestablish the factory settings.	22
[22] ANTENNA	Switch for selecting between the two antenna inputs A and B.	18
[23] CURSOR	Enabling switch and position indicator for alphanumeric input of station abbreviations.	21
[24] IF	Switch for selecting the IF (intermediate frequency) bandwidth for improved adjacent channel sensitivity in the NARROW position. WIDE: 150 kHz bandwidth. NARROW: 110 kHz bandwidth.	18
[25] <	Paging through the alphanumeric character set in descending order.	21
[26] MONO	Mono selector switch. Stereo broadcasts will be reproduced in mono mode.	19
[27] >	Paging through the alphanumeric character set in ascending order.	21
[28] BLEND	Two-stage HI-BLEND filter for suppressing stereo noise.	19
[29] AUTO	Provides automatic programming of a selected station into the next available station memory.	14
[30] MUTING	On/off switch for automatic MUTING of weak stations.	19
[31] STORE	This function instructs the microprocessor to accept data for a station memory. The station number flashes on the display [11]. The data are not written into the memory until the ENTER [6] key is pressed.	17
[32] RDS	Activates reception with RDS (Radio Data System). Can only be activated in conjunction with the corresponding RDS option.	20

Rear panel:

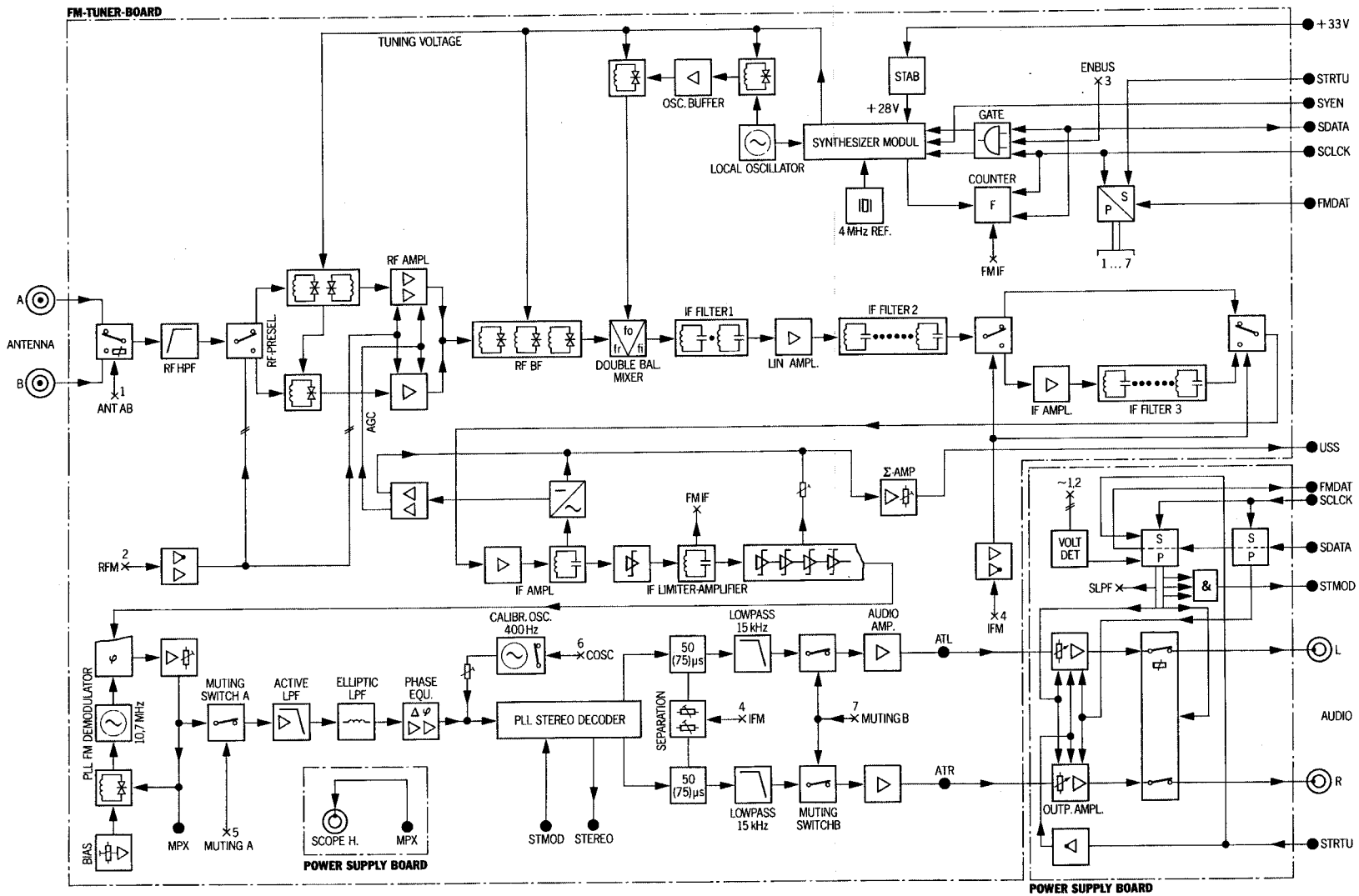
Control element	Function	Page
[33] ANTENNA A	Input socket (coaxial, 75 Ohm) for the antenna terminal A.	5
[34] ANTENNA B	Input socket (coaxial, 75 Ohm) for the antenna terminal B.	5
[35] AUDIO	Output sockets (CINCH) for connecting a (pre)amplifier.	5
[36] SCOPE	Output sockets (CINCH) for connecting a cathode ray oscilloscope for analyzing the reception quality or for connecting an analog signal strength instrument.	27
[37] SERIAL LINK	Serial port for connecting an external IR receiver B206 or controller B200. The internal IR receiver can also be switched off on this socket by interconnecting pin 1 with pin 2 and pin 4 with pin 5.	
[38] AC POWER	Power inlet.	5

Synoptical diagram





Tuner circuit diagram



REVOX®

Argentina: Buenos Aires, Tel. (1) 311 25 74 • **Australia:** Chatswood, Tel. (2) 417 4700 • **Austria:** Wien, Tel. (1) 47 34 65 • **Belgium / Luxemburg:** Houthalen/B, Tel. (11) 52 58 58 • **Brazil:** Sao Paulo (HiFi), Tel. (11) 872 9011 • Rio de Janeiro (Pro), Tel. (21) 622 2843 • **Canada:** Toronto, Tel. (416) 510 1347 • **Chile:** Santiago, Tel. (2) 246 23 33 **Denmark:** Rödovre, Tel. 36 72 11 12 • **Finland:** Helsinki, Tel. (0) 755 7711 • **France:** Paris, Tel. (1) 47 23 55 88 **Germany:** Löffingen, Tel. (7654) 803 0 • **Greece:** Athens, Tel. (1) 603 667 • **Holland:** Heijen, Tel. (8851) 96 260 **Hong Kong / Philippines:** Hong Kong, Tel. 898 93 66 **India:** Bombay, Tel. (22) 24 05 38 • **Italy:** Settimo Milanese, Tel. (2) 33 50 08 10 • **Japan:** Tokyo, Tel. (3) 3370 34 17 **Mexico:** Mexico, Tel. (5) 559 76 77 • **Norway:** Oslo, Tel. (2) 289 490 • **Poland:** Gdansk, Tel. (58) 47 94 00 **Portugal:** Lisboa, Tel. (1) 793 50 61 • **Singapore / Malaysia / Indonesia:** Singapore, Tel. 250 72 22 • **Spain:** Madrid, Tel. (1) 519 24 16 • Las Palmas de Cran Canaria, Tel. (28) 37 11 39 • **Sweden:** Solna, Tel. (8) 730 02 80 **United Kingdom:** Thatcham, Tel. (635) 876969 • **USA:** Nashville, Tel. (615) 254 56 51 • **Venezuela:** Caracas, Tel. (2) 985 40 03 • **Head office:** REVOX, Althardstrasse 146, CH - 8105 Regensdorf, Tel. (1) 870 77 11.

Printed by: Schaltungsdienst Lange, Berlin (GERMANY)